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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,594	09/19/2003	Clement Sagayanathan	P16921	7047

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EXAMINER	
NORRIS, JEREMY C	

ART UNIT	PAPER NUMBER
2841	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/665,594	SAGAYANATHAN ET AL	
	Examiner	Art Unit	
	Jeremy C. Norris	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 11-25 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,747,045 (Stross).

Stross discloses, referring primarily to figure 4, an apparatus comprising: one or more leads (12) for a component (11) to be inserted into an opening (32) of a substrate (31), the one or more leads to substantially prevent movement of the component perpendicular to substrate (se col. 1, lines 35-45) [**claim 1**], wherein the component is an electronic component and the substrate is a printed circuit board [**claim 2**].

Similarly, Stross discloses, an apparatus comprising, an electronic component body (11); and one or more leads (12) coupled to and extending from the electronic component body, wherein a first lead of the one or more leads comprises a first leg and a second leg, the first leg and the second leg defining an acute angle there between [**claim 11**], the second leg comprising a first portion (14) defining the acute angle with the first leg, and a second portion (15) substantially parallel to the first leg [**claim 12**], the second leg comprising a third portion (16) defining an obtuse angle with the second portion [**claim 13**], wherein a length of the second portion is substantially equal to a

thickness of a substrate to which the electronic component body is to be mounted [**claim 14**].

Moreover, Stross discloses, a method comprising: bending an electronic component body lead (12) to form a first leg and a second leg, the first leg and the second leg defining an acute angle there between [**claim 15**], further comprising: bending the second leg to form a first portion (14) defining the acute angle with the first leg, and a second portion (15) substantially parallel to the first leg [**claim 16**], further comprising bending the second leg to form a third portion (16) defining an obtuse angle with the second portion [**claim 17**], wherein a length of the second portion is substantially equal to a thickness of a substrate to which the electronic component body is to be mounted [**claim 18**], further comprising: electrically coupling the lead to an electronic component body (11) [**claim 19**], wherein the lead is attached to an electronic component body [**claim 20**].

Furthermore, Stross discloses, a method comprising: placing a lead (12) of an electronic component body (11) into an opening (32a) of a substrate (31), wherein the lead comprises a first leg and a second leg defining an acute angle there between [**claim 21**], the second leg comprising a first portion defining the acute angle with the first leg, and a second portion (15) substantially parallel to the first leg [**claim 22**], the second leg comprising a third portion defining an obtuse angle with the second portion [**claim 23**], wherein a length of the second portion is substantially equal to a thickness of the substrate [**claim 24**], further comprising: electrically coupling the lead to the substrate (se col. 3, lines 15-35) [**claim 25**].

Claims 3-5 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,880,493 (Lockhart).

Lockhart discloses, referring to figure 2, an apparatus comprising: an electronic component body (27); and one or more leads (19) coupled to and extending from the electronic component body, wherein a first lead of the one or more leads comprises a first portion in contact with the body, a second portion comprising an end of the first lead, and a third portion between the first portion and the second portion: wherein a portion of the first portion is to reside in an opening of a substrate (13), wherein a portion of the third portion is to contact a first side of the substrate, and wherein a portion of the second portion is to reside in the opening **[claim 3]**, wherein a second portion of the second portion is to contact a second side of the substrate **[claim 4]**, wherein the electronic component body is to be disposed away from the substrate **[claim 5]**,

Similarly, Lockhart discloses, a system comprising: an electronic component body (27); one or more leads (19) coupled to and extending from the electronic component body; and a substrate defining at least one opening, wherein a first lead of the one or more leads comprises a first portion in contact with the body, a second portion comprising an end of the first lead, and a third portion between the first portion and the second portion, wherein a portion of the first portion resides in the opening, wherein a portion of the third portion contacts a first side of the substrate, and wherein a portion of the second portion resides in the opening **[claim 7]**, wherein a second portion

of the second portion contacts a second side of the substrate [**claim 8**], wherein the electronic component body is disposed away from the substrate [**claim 9**].

Claims 3, 6, 7, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,228,091 (Rice).

Rice discloses, referring to figure 1, an apparatus comprising: an electronic component body (20a); and one or more leads coupled to and extending from the electronic component body, wherein a first lead of the one or more leads comprises a first portion in contact with the body, a second portion comprising an end of the first lead, and a third portion between the first portion and the second portion: wherein a portion of the first portion is to reside in an opening (22a) of a substrate (10), wherein a portion of the third portion is to contact a first side of the substrate (see col. 2, lines 55-65), and wherein a portion of the second portion is to reside in the opening [**claim 3**], wherein the electronic component body is to contact a second side of the substrate [**claim 6**].

Similarly, Rice discloses, a system comprising: an electronic component body (20a); one or more leads coupled to and extending from the electronic component body; and a substrate (10) defining at least one opening (22b), wherein a first lead of the one or more leads comprises a first portion in contact with the body, a second portion comprising an end of the first lead, and a third portion between the first portion and the second portion, wherein a portion of the first portion resides in the opening, wherein a portion of the third portion contacts a first side of the substrate (see col. 2, lines 55-65),

and wherein a portion of the second portion resides in the opening **[claim 7]**, wherein the electronic component body contacts a second side of the substrate **[claim 10]**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stross in view of US 6,296,509 (Leung).

Stross discloses, an expansion card comprising: a circuit board (31), and an electronic component body (11) coupled to the circuit board, the electronic component body comprising one or more leads (12) coupled to and extending from the electronic component body, wherein a first lead of the one or more leads comprises a first leg and a second leg, the first leg and the second leg defining an acute angle there between. Stross does not specifically disclose a connector coupled to the circuit board, the connector to connect to a motherboard **[claim 26]**. However, it is well known in the art to add connectors to circuit boards to connect to motherboard as evidenced by Leung (see figure 3). Therefore, it would have been obvious, to one having ordinary skill in the art, at the time of invention, to add a connector coupled to the circuit board in the invention of Stross, the connector to connect to a motherboard. The motivation for doing so would have been to provide the ability to transmit signals from the circuit board to a motherboard. Moreover, the modified invention of Stross teaches, the second leg comprising a first portion defining the acute angle with the first leg, and a second portion substantially parallel to the first leg **[claim 27]**, the second leg comprising a third portion defining an obtuse angle with the second portion **[claim 28]**, wherein a length of the second portion is substantially equal to a thickness of the circuit board **[claim 29]**.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents disclose a component with shaped leads:

US 5,160,270 Reymond,

US 6,617,522 Tabacutu.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCSN

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